

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

- 1 1. (Currently Amended) A display device that reduces energy consumption during
2 row transitions comprising:

3 with a plurality of pixels arranged in an array having n rows and m columns,
4 each of said pixels comprising:

5 a switching element having a gate, and

6 a capacitor coupled to said switching element;

7 rows n and columns m; wherein the pixels of a row can be selected through
8 control lines and data lines that select said pixels; and with

9 a row driver circuit for activating that activates each pixel in the n rows by
10 means of a row voltage applied to said gate of said switching element; and with

11 a column driver circuit for controlling that controls the m columns with a
12 column voltage, which voltages correspond said column voltage corresponding to the
13 image data of the pixels of the a selected row to be displayed, and

14 wherein, it is provided upon during a transition from a selected row n to
15 another row n+x, said capacitor is charged with an intermediate voltage level

16 during discharging of row n and row n+x is charged with said intermediate voltage
17 level by said capacitor after the row voltage of row n is fully discharged that the row
18 voltage is connected to an intermediate voltage level, and the row n+x is first
19 connected to said intermediate voltage level and subsequently is charged up to the
20 required row voltage wherein the charge of the selected row n can be stored in a
21 capacitor at the intermediate voltage level.

1 2. (Currently Amended) A display device as claimed in claim 1,

2 characterized in that a plurality of intermediate voltage levels is-are provided
3 for the charge sharing, and the selected row_n can be coupled in steps to a first
4 intermediate voltage level and subsequently to the further intermediate voltage
5 levels up to the a final intermediate voltage level for the purpose of charge sharing.

1 3. (Canceled).

1 4. (Currently Amended) A display device as claimed in claim 1,

2 wherein the-a maximum column voltage is used as the intermediate voltage
3 level.

1 5. (Currently Amended) A display device as claimed in claim 1,

2 wherein the a voltage corresponding to the intermediate voltage level is half
3 of the applied row voltage.

1 6. (Currently Amended) A display device as claimed in claim 1,
2 wherein a switching unit is provided for first connecting the selected row n,
3 and subsequently the next-row n+x to the intermediate voltage level.

1 7. (Currently Amended) A method of reducing energy consumption during row
2 transitions in controlling a display device with pixels arranged in rows n and
3 columns m, each pixel comprising a capacitor coupled to a switching element, said
4 method comprising the following steps:

5 supplying wherein row voltages are supplied to the rows via control lines so
6 as to select said rows;

7 , and wherein supplying column voltages are supplied to the columns m via
8 data lines;

9 during a transition from a selected row n to another row n+x,

10 charging said capacitor to an intermediate voltage level during discharging of
11 selected row n;

12 charging row n+x to said intermediate voltage level with said capacitor after
13 the row voltage of row n is fully discharged

14 , and wherein the rows are consecutively selected, and in the case of a transition
15 from a selected row n to another row n+1 the charge applied to the selected row n is
16 transferred to an intermediate voltage level, and the other row n+1 is first
17 connected to said intermediate voltage level and is subsequently charged up to the
18 required control voltage, wherein the charge of the selected row n can be stored in a
19 capacitor at the intermediate voltage level.